

R E S E A R C H R E P O R T

IMPROVEMENT OF GUJARATI HANDWRITING

Dr. Usman A. Bisnagri
Lecturer in education
I.G. Teachers College,
Ahmedabad. (Gujarat)

(1) INTRODUCTION

Handwriting requires to be attended to as a skill. In day-to-day communication a person could very well be judged by his handwriting. As far as handwriting is concerned in present day education, it seems to be more or less a neglected area. Keeping the whole scenerio in view, we find very few persons having good & legible handwriting. Good handwriting demands a close observation of the shape of different letters and an ability to imitate the same. Moreover, there needs to be a neuromuscular co-ordination as well as great concentration in the process.

Now in order to write in a well legible manner, a child must be able to read correctly. It is for this reason that proper reading habits are to be nurtured both for oral as well as written expressions, not to speak of comprehension. It is a sorry plight of present day education that proper reading as well as writing habits are, in most cases, ignored, with the result that one seldom comes across the delicate script or embellished handwriting which was considered a mark of culture. Calligraphy, of course, was an important attainment in the past when in days gone by, when manuscript writing was the only means to preserve the lore,

The development of technologies like type writing (electronic) Xerox, Fax etc., in the last few decades have become a major threat to the already diminishing the cultivation of the art.

Handwriting as an important educational skill is, not looked after in our schools as it should be. Good-handwriting requires cultivation of habits like, proper holding of pen, correct sitting posture, attention to curves and slants, writing individual letters in their correct forms, proper gaps between letters, words and lines etc. These habits are formed in primary schools which mostly are not in a position to fulfill these objectives, primarily because the classes are over crowded and the teachers are not well qualified for this task or are not in a position to bestow individual care. It is the individual care that is of utmost important, if we desire to improve the handwriting of our children.

Beautiful, effective and attracture handwriting is an asset for a school pupil. Nowadays, it is felt that there is a typical carelessness being entertained towards good handwriting. We often hear complaints from teachers that Gujarati handwriting of a majority of the students attending primary and secondary school is illegible, irregular, lacks proper curves and proper size. The teachers are not very cautious about the causes of this state of affairs. They are also not sure about how to improve the handwriting after rectifying the said causes. Everyone has his own view about this problem and describes different reasons to this melody. Therefore, this problem requires a thorough research.

The main problem of the study was finding out ways & means of improving the Gujarati handwriting of the pupils of Std.V belonging to primary Schools of Ahmedabad City and suggest different factors that should be considered to promote good handwriting.

(2) OBJECTIVES OF THE STUDY

- (1) To study the improvement in the quality of handwriting of the pupils of Std.V of Ahmedabad City
- (2) To suggest the remedial measures to overcome defeciencies of pupils whose progress is affected adversely by illegible handwriting

(3) HYPOTHESIS

The following null hypothesis was formulated for the study. There would not be significant difference between the mean Scores on Bisnagari's Handwriting Quality Scale of the pupils of (a) walled city area (b) beyond river area and (c) labour area, at .05 level.

(4) DESIGN OF THE STUDY

Three group pre-test and post test design was used to study the effectiveness of the learning strategy with reference to handwriting. The training programme consisted of Orientation about the development of muscular habits which would result in legible, speedy and asthetic handwriting with the least expenditure of time and energy.

The orientation of the teachers selected for the study was followed by explanation and discussion. The main points were as follows.

- | | |
|-------------------------|---|
| A. Legibility | (1. Spacing between words |
| | (2. Spacing between lines |
| | (3. Slant of writing |
| | (4. Form and size of letters |
| | (5. Regularity of letters and slants |
| | (6. Absence of flourishes |
| B. Speed | (1. Ease of movement |
| | (2. Rhythm of movement |
| | (3. Slant of writing |
| | (4. Size of letters |
| | (5. Continuity of letters |
| | (6. Methods of holding pen and placing paper |
| C. Aesthetic appearance | (1. Form of letters |
| | (2. Regularity of writing |

(5) SAMPLE

A purposive sample of the students from Six Gujarati Medium Schools was selected from different locations of Ahmedabad City.

- (1) Two Schools from walled city area
- (2) Two schools from beyond river area
- (3) Two schools from labour area

Two divisions of Std.V of each School were selected for the purpose of the study.

TABLE 1

LOCATION WISE DISTRIBUTION OF SAMPLE

Location	<u>Sample Selected</u>		TOTAL
	Boys	Girls	
Walled city area	60	90	150
Beyond river area	104	97	201
Labour area	101	87	188
	—	—	—
TOTAL	265	274	539

The pupils having 10 plus age group enter Std.V as per the rules of Gujarat State. This stage is known as middle school stage or higher primary school. At this stage, the pupils attain fairly satisfactory maturity in handwriting. Therefore, it was decided that the sample should be drawn from Std.V of the schools located in different areas of Ahmedabad city. Those who appeared for pre-test & post-test were considered for the study.

(6) TOOLS USED

The following tools were used for the purpose:

- (1) Bisnagri's Gujarati handwriting quality scale was used for finding the numerical score and study the difference in quality in pre test and post test.
- (2) In all, Six exercises were developed by the researcher. These exercises were constructed in graded form as follows. (See Appendix A)

Exercise 1. Simple words without connective strokes

Exercise 2. Simple words with connective strokes

Exercise 3. Simple words with vertical and horizontal strokes

Exercise 4. Sentences with exceptional letters

Exercise 5 Sentences with connective words

Exercise 6. A passage

A NOTE ON THE CONTENT

The above exercises served the content for the study. It was composed in pure Gujarati language. It contained nearly all the letters of alphabet of the Gujarati language. It stressed the use of connectives. Several punctuation marks were included in it. Certain words had been introduced specially for training the smoothness of the Curves. Exceptional forms of letters had been included. The exercises were graded and were long enough to fulfil the important objectives for the quality of Gujarati handwriting.

(7) DATA COLLECTION

Two divisions of Std.V of each Gujarati medium school were selected for experimentation. The specimen samples from all the six schools of different locations were collected by administering the Bisnagri Handwriting quality scale. Thus pre test samples were collected.

All the twelve teachers who participated for the project of six different schools were trained for the use of graded exercises and to implement the ideas for the copying of writing of Gujarati script. It took three months to complete the above endeavour. During the training period, the researcher visited the schools often and discussed with the concerned teachers about their problems as well as supervised their work.

At the end, a post test data was collected by giving a standardised test for measuring the quality of Gujarati handwriting to the above sample.

(8) DATA ANALYSIS

The obtained data was analysed with the help of the central tendency, variability of scores and "t" test.

TABLE 2LOCATIONWISE DISTRIBUTION OF SCORES AND THEIR AVERAGESPre test result

Interval of Scores	Walled city area	Beyond river area	Labour area	TOTAL GROUP
70-74				
65-69				
60-64				
55-59			-	
50-54		3	1	4
45-49	2	3	-	5
40-44	11	14	8	33
35-39	19	34	11	64
30-34	39	38	32	109
25-29	41	48	53	142
20-24	28	44	48	120
15-19	9	12	29	50
10-14	1	5	6	12
5-9	-	-	-	-
TOTAL	150	201	188	539
Mean .	29.3	29.3	25.9	28.11
S.D.	5.9	7.37	6.56	7.6

TABLE 3LOCATIONWISE DISTRIBUTION OF SCORES AND THEIR AVERAGESPost test result

Interval of Scores	Walled city area	Beyond river area	Labour area	TOTAL GROUP
70-74				
65-69		2		2
60-64		1	1	2
55-59	1	2	2	10
50-54	1	14	6	21
45-49	6	19	9	34
40-44	20	35	20	75
35-39	26	21	39	96
30-34	42	43	56	141
25-29	30	34	37	101
20-24	17	14	16	47
15-19	6	1	2	9
10-14	1	-	-	1
5-9-	-	-	-	-
TOTAL	150	201	188	539
Mean	32.24	37.1	33.9	34.61
S.D.	5.79	8.23	7.93	8.87

TABLE 4SEX WISE DISTRIBUTION OF SCORES AND THEIR AVERAGESPre-test result

Interval of Scores	Boys	Girls
70-74		
65-69		
60-64		
55-59		1
50-54	2	4
45-49	2	7
40-44	11	27
35-39	26	50
30-34	50	66
25-29	71	69
20-24	71	38
15-19	23	11
10-14	9	1
5-9-	-	-
TOTAL	265	274
Mean	27.17	31.34
S.D.	7.38	7.64

TABLE 5SEX WISE DISTRIBUTION OF SCORES AND THEIR AVERAGESPost test result

Interval of Scores	Boys	Girls
70-74		
65-69	1	1
60-64	1	1
55-59	2	8
50-54	7	14
45-49	16	18
40-44	37	38
35-39	46	50
30-34	80	61
25-29	48	53
20-24	24	23
15-19	3	6
10-14	-	1
5-9-	-	-
TOTAL	265	274
Mean	34.15	35.1
S.D.	8.16	9.48

(9) OBSERVATIONS MADE BY THE INVESTIGATOR AS WELL AS HIS TEACHER ASSOCIATES:

The two main objectives for undertaking this research project were:

- (a) To study the improvement in the quality of handwriting and to locate the factors that lead to the deterioration in the handwriting.
- (b) To find out factors that promote good handwriting.

The above two objectives were kept in mind while carrying out this experiment. Here are observations for the same.

- (1) The shape of the finger and the style of holding pen is hereditary. There are all chances of distortion of letters if pen is not properly held.
- (2) If pressure of the thumb or index finger is more on the pen, then handwriting is distorted.
- (3) Posture : Some of the student sit limping on one side while some other keep their note-books diagonally.
- (4) Sometimes the height of the bench is comparatively more. This improper position of the bench is also responsible for distortion of handwriting.
- (5) The students imitate the writing of the teacher. Therefore, a teacher with bad handwriting will also be responsible for it.
- (6) Sometimes speedy writing and carelessness also contribute towards bad handwriting.
- (7) Pointed pencils, small pencils or low quality pencils, ball-point pen etc. are responsible for bad handwriting.
- (8) There are controversies as to which of the procedure is more suitable for the beginner, tracing or copying. Research studied conducted in this area proved that in learning methods of handwriting, copying is a better method than tracing.

On the basis of the study and during the observation of the training programme, the following factors were considered to promote good handwriting.

- (1) To sit straight on the bench.
- (2) To have sizeable length of pencil.
- (3) Avoid such habits which would make the point of the pencil blunt (e.g. Putting the pencil in between the teeth).
- (4) Avoid holding the pencil too close or too far away from its point.
- (5) To make the students develop, a habit of holding the pencil or pen with their thumb and two other fingers. The finger next to index finger should hold the pencil or pen from the top. The index finger should remain on the upper side and should be bent downwards towards the nib or the point of the pencil.
- (6) Holding the pencil or pen as stated above and applying proper pressure with the thumb will result in good handwriting.
- (7) The bench and desk of the student should be properly arranged in such a way that alongwith the fingers and hand, the position of the elbow and its necessary movement can be done easily. This will result in good handwriting.
- (8) To read carefully the passage of writing given, while copying it.
- (9) To listen carefully the instructions given while writing dictation.
- (10) To arrange one's thought properly in one's mind so that the writing may be clear and good.
- (11) It should be remembered that students tend to distort their handwriting when they write fast. Therefore, proper care should be taken about that.

- (12) A model lesson should be prepared by language teacher after classifying the consonants according to their curves and shape. This model should be displayed before the class. Students should be explained how to write in accordance with the ideal sample placed before them.

TABLE 6

"t" TEST APPLIED TO PRE-TEST MEANS OF THREE DIFFERENT AREA-WISE PUPILS.

Area	Mean	S.D.	N	t	Significance
a) Walled City	29.3	5.9	150	0	N.S.
b) Beyond river	29.3	7.37	201		
- - - - -					
b) Beyond river	29.3	7.37	201	4.65	.01
c) Labour	25.9	6.56	188		
- - - - -					
c) Labour	25.9	6.56	188	5.07	.01
a) Walled City	29.3	5.9	150		

TABLE 7"t" TEST APPLIED TO POST-TEST MEANS OF THREE DIFFERENT
AREAWISE PUPILS

Area	Mean	S.D.	N	t	Signifi- cance
a) Walled City	32.24	5.79	150	6.49	**
b) Beyond river	37.1	8.23	201		
b) Beyond river	37.1	8.23	201	3.90	**
c) Labour	33.9	7.93	188		
c) Labour	33.9	7.93	188	2.22	*
a) Walled City	32.24	5.79	150		

* Significance at .05 level

** Significance at .01 level

TABLE 8"t" TEST APPLIED TO DIFFERENCE BETWEEN MEAN SCORES OF
PRE TEST & POST TEST (AREA-WISE)

Area	Pre-Test:		Post-Test:		t
	Mean	S.D.	Mean	S.D.	
(a) Walled City	29.3	5.9	32.24	5.79	4.381
(b) Beyond river	29.3	7.37	37.1	8.23	10.1
(c) Labour	25.9	6.56	33.9	7.93	10.8

(10) INTERPRETATION:

It is observed from table 6 that there is no significant difference between the mean scores of pupils of walled city area as well as beyond river area. It is worthy to note that mean scores of both the areas are equal (29.3). The significant difference between the mean scores of pupils from labour area and two other areas are only due to the low mean score of the pupils from labour area. It was rather expected that mean score of the pupils from labour area would be lowest. It is evident that the parents of pupils of this area are more or less illiterate. They lack physical facilities for the study and there was no motivating force in existence at the pre-test level.

The above point becomes very very obvious from table 7 as well as table 8, by taking into account the difference between mean scores at the pre test and post test levels of the same pupils. Specially the pupils of labour area gain 8.0 points in mean scores. Those from beyond river area gain is 7.8 points, while those from walled city area gain is only 2.94 points. The probable reasons for the highest gain in labour's area might be that they could have been fully motivated by this experiment. It might also due to be **HOW-THORNE EFFECT**. It is not surprising that pupils from beyond river area also make a good show by gaining 7.8 points because these pupils come from Posh-area, the parents are all learned, most of them being having professional category occupation. The pupils from walled city area do not get much benefit from this experiment, is clearly indicated by the least gain in mean score of 2.94 only. Of course, the difference is significant at .01 level.

. It can be observed from table 8 that the "t" values are going higher as one shift from walled city area to labour area through beyond river area.

(11) CONCLUSION:

So far as the present investigator's knowledge goes this type of experiments on the improvement of handwriting is being carried out for the first time. Hence it is very necessary to recapitulate this type of experiment on other population of the State of Gujarat, then only one can be sure about the validity of the results of this experiment.

Finally the purpose of research should not be only academic, but the findings in the true perspective should be utilised to play a very important part of students educational activities.

R E F E R E N C E S

- (1) Robert, S. Ellis : (1965) : Educational Psychology, New york : D. Van. Nos. Trend. Co. Inc. East West Student edition P.262.
- (2) Peter, Sandiford : (1932) : Educational Psychology, New york, Longmans Green & Co. PP 355-56.
- (3) Parikh, P.C. (1971) : "The Development of Script from Brahmi to Nagri in Gujarat upto 1500 A.D."
Unpublished Thesis, Ahmedabad, Gujarat University.
- (4) Dorbth Sara (1968) : Handwriting Analysis, New york: Pyramid Books, p.15
- (5) Harrick, Virgile : 1970 : "Handwriting & children's writing"
Elementary English, Journal of Educational Research, Vol.64, No.3, P.106.
- (6) Gates, Arthur I. & La Balle, J.(1924)
"Study of writing ability and its relation to other abilities based on repeated tests during a period of 20 months" Journal of Educational Psychology, Vol.15, PP 205-16.
- (7) Anastasi Anne, (1959) : Psychological Testing, New york : The Macmillan Co. P.72.
- (8) Garrett H.E. (1967) : Statistics in Psychology and Education,
New york : Longman Green & Co. P.75

A P P E N D I X - B

EVALUATION SHEET
WITH DIFFERENT SCALE VALUES

ॐ नमो भगवते वासुदेवाय

ઇલાહને પ્રભુ તારા નામને કહે/કો કહે
 સ્વેદનિઠાઈ ગર હજી ત્યાં નાહુ મેલેલી લોડા બવફી
 રૂંડે સુલહુડી લોડા તો સો સમાજ માં અસીદતા
 સ્વેદ ગામડામાં ફુડાજ કેપર સેવી રમાવડો ફોલી
 સુખદા દારૂ મીઠાઈ આ તમાલો રમાવા
 રોડો રોડો રોડો ગામડામાં ભોલી મેડ યાં રોડો 11/12
 રોડો ફક્ત સુગંધ લોઈ લઈ બાદ તરવારે દે
 ગામડામાં ફેર હાથ દેતા રૂંડે મેલે અબસાલવા લા
 સો સ્વદેશી - બસ રૂંડો રૂંડે મેલે - લે રોડો સાળી
 લીલા લસોબ રાઈ રૂંડે ફુડાઈ ફુડા મેલો
 રૂંડે રૂંડે મેલો રોડો રૂંડે રૂંડે

Specimen with Scale Value 20

ગાંધીજી ગાંધીજી

પંજાબી સુખમને કુમરો કલો

અંત્ર મહાપદર હલં લપા લોં લાડુ, જલેબા, પેડ,

લરૂનીએ બુલારૂંભા લેમાલા સો આનંદખાખરાલો,

અંત્ર ગાંધીજી કુકાળ ઉપર ચડીઆલો; "કેલો

સુગંધીદાર મહાપદ ૨૧૧ (મોલે આખા)"

સોંઠે પેમા મોખા. ગાંધીજી જોલો ગાંધીજી

પેમા સોંઠે કલું, "સુગંધ લાધા લો ખાધા લરૂબરલો"

ગાંધીજી કુકાળ ઉપર ચડીઆલો પેમા ખખડાલો.

પાલો આંભલો. ખખડારે આંભલો લો પેમા

લાધા લરૂબરલો"

સોંઠે દુઃખખા કુમા મોગા અને મોગા મોગા

સોંઠે લાડુ આખા.

Specimen with Scale Value 30

ગાજીમાં ગામડિયો

દિલાએ મલબાને દૂધકો કીધો.

એક મીઠાઈદાર દુધ દયા લાડુ, રલેબી, પેડા,
બરફી અને સૂતરફેણી પેચાલા સો આનંદથી—
ખરીદવા. એક ગામડિયો દુકાન ઉપર મોકી આવ્યો,

"કેવી સુગંધીદાર મીઠાઈ ! શા બાલે આપી ?"

—શહે પૈસા માગ્યા. ગામડિયો જોવી ઉઠ્યો: "પૈસા !"

શહે ક્યું, "સુગંધ બીધી લે આવ્યા બરાબર છે"

ગામડિયાએ જરૂર દાખ દેયો અને પૈસા ખખડાવ્યા.

"લો, સાંભળો ખખડાટ સાંભળ્યો લે પૈસા લીધા
બરાબર છે." શહે દુખથી કામા ઝાંગી અને—

રાત માટે રાજાશી આપી.

Specimen with Scale Value 40

ગઝલનો ગામડિયો

દલિઅને પ્રયત્નનો દુનિયા બચો.

એકે મીઠાઈનાર હતું. ત્યાં લાડુ, જીરેલી, પેંડા,

ખમ્મી અને સૂતરચોરી ગેચાતાં. સો અન્નદેવી

ખરીદતાં. એકે ગામડિયાં દુકાન 'અમર વહી આવ્યો;

"કુલી સુગંધીદાર મીઠાઈ શા ભાંગે આવી?"

શહેર પૈસા માગ્યા. ગામડિયાં બોલી બિઠવો. "પૈસા"

શહેર કહ્યું, સુગંધ ભાંગી તે ગાંધી બનાવે છે."

ગામડિયાએ ઝટ લાપ નહોતો અને પૈસા ગળાવ્યા.

"સાહેબ, સાંભળો. ગમડાટ સાંભળ્યો તે પૈસા

લીધા બસબસ છે."

શહેર દુનિયા કાઢા ગાંધી અને શાસન નાટો

શાસનથી આવી.

with Scale Value 50

અભયવૃક્ષો વાગેલો

દિવસે સમયને જુઓ કહી.
 એક સીકાઈયે હવે ત્યાં લાકુ બસેલી,
 એક, બસેલી અને બુદ્ધિવૃક્ષો વાગેલી.
 એ અમરવૃક્ષો બસેલી. એક -
 વામડિયાં દુકાન' કેવલ અલોચાલ્યો;
 "કેવી સુગંધીયે સીકાઈ? આ બાપ
 બાપી?" એક વાસા મા-વા. વામડિયા
 વાસી કોડવા. "ના!" એક કલ્પિત
 સુગંધ લીધી ને બાપે બસાવ્યું.
 વામડિયાએ જલ હાથ દેવો અને
 એસા બસાવેલા. "હા, આંખથી. મસકાવે
 આંખથી ને એસા લીધા બસાવ્યું."
 એક દુઃખથી કમા માગી અને જ્ઞાન
 માટે આવાશી આવી.

Specimen with Scale Value 60

ឯកសារ ២៤៧៩២

છાત્રોને પ્રયત્નનો ફાયદો હોય -----

સાહેબ મીઠાઈદાર હતા તથા તાલુકા, જિલ્લો, તાલુકો, નામ

~~राज्ये सुखमश्नुते तस्यैव राजा~~

સાંકે જલ્પવિદ્યાને દુહાના ઉપર અર્થ આપ્યો, બહેન

रजुगधीहार गणेशजी । रजुगधीहार गणेशजी ।

~~इति चैव जगतां जगतीनां जगती अहं चैव जगतां~~

• "इसके अलावा, 'मो-मो-मो' टाइटिल 'मो-मो-मो' 'मो-मो-मो' है।"

~~ગાથાનિદયાને જરૂર હાથ ધરનાર અને પૈસા જમાડાવના~~

~~જે દેશો તે લોકો, સામાજિક, જગદાટ સામાજિક લોકો~~

~~પેસા તમિલ તારાજર છે ન શેરે દુ.ખધા દામા~~

~~માગારી અને જ્ઞાના માટે જ્ઞાનાશી આપી.~~

Answer with Scale Value 70

ગજબળા ગામડિયાં

દલાઈ પ્રજાત્મન દૂરાડાં હયાં.

અંક મીઠાઈદાર હતુ. ત્યાં ભાડુ જલની.

પેડા, બરડી અને સૂતરડુંગી વેચાતાં. સૌ આનંદથી

ખરીદતાં. અંક ગામડિયાં દુકાન ઉપર ચઢી આવ્યાં;

“હવે સુગંધીદાર મીઠાઈ શા ભારા આપી?”

શંકે પસા માઝ્યા. ગામડિયાં ભાલી કીડ્યાં: “પસા!”

શંકે હસ્યું, “સુગંધ લીધી તો ખાવા બરાબર છે.”

ગામડિયાંએ જટ હાથ દાયાં અને પસા ખખડાવ્યાં:

“હા, સાંતવળાં ખખડાટ સાંતવળાં તો પસા લીધા

બરાબર છે.”

શંકે દુઃખથી સમા ભાગી અને જ્ઞાન

માટે શાબાશી આપી.

TEST PAPERગજબનો ગામડિયો

ઘલાંગે કપભને દૂધકો કહ્યો.

એક મીઠાઈઘર હતું ત્યાં લાડુ, જલેબી, પંડા, બરફી અને
નવરંગી વેચાતા. સૌ આનંદથી ખરીદતા. એક ગામડિયો દુકાન ઉપર
ચઢી આવ્યા; “કેવી મુગધીદાર મીઠાઈ! શા ભાવે આપી?”

ગંઢે પૈસા માગ્યા ગામડિયો બોલી ઊઠ્યો “પૈસા!”

ગંઢું, “મુગધ લીધી તે નાધા બરાબર છે.”

ગામડિયાએ એક હાથ ધર્યો અને પૈસા બખડાવ્યા. “લો,
સાબળા બખડાટ સાબળ્યો તે પૈસા લીધા બરાબર છે.”

ગંઢે દુખથી ક્ષમા માગી અને જ્ઞાન માટે શાબ્દાશી આપી.